GPS Vehicle Tracker

Smart car alarm

User Manual (Model: VT200W)

Version 1.1

Please Read Carefully Before Operation

Monitoring of Public Conveyance

Security of Rental Car

Ambulance assignment

Cargo Logistic Assignment

Fleet Management

Taxi Assignment

Security of the Outdoor Activities

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1. Product Overview

VT200W is a GPS/GSM/GPRS tracking device which is specially developed and designed for vehicle real-time tracking and security. With superior GPS and GPRS modules, VT200W has good sensitivity and stable performance. Especially, VT200W is well designed to work with our web-based tracking system, which is suitable for a company to establish a tracking server to provide real-time tracking solutions to their customers or manage their fleet.

2. Applications

- ✓ Vehicle Real Time Tracking
- ✓ Vehicle Security/Anti-Hijack
- ✓ Fleet Management

3. Features & Functions

1) Tracking by SMS/GPRS (TCP/UDP)
2) Tracking by time/distance interval
3) Real time tracking via the web-platform
4) Get position location via call/SMS
5) Get location physical name via SMS & from the web-platform
6) Google Map link for location via SMS, it shows your location on map via mobile phone.
7) SOS Panic button
8) Mileage calculation with longitude and latitude via SMS; view mileage data via GPS web-based tracking centre system
9) Built-in motion sensor for power & GPRS flow saving mode (sleep mode)

10) Built-in 2MB memory & position logging capacity up to 10,000+waypoints even no GPRS signal
11) Engine on/off detection
12) Remote Engine cut off to stop the car in safe condition
13) Built-in backup 650 mAh battery
14) Wiretapping/remote listening
15) Crash alarm (optional)
16) Can equip with RFID kit for driver identification and auto Arm/Disarm functions
17) (movement/towed alert, ignition alert, auto cut off engine etc) (Optional)
18) I/O: 3 Inputs, 2 Outputs, 1 Analog Input
19) Analog input for Temperature & Fuel sensor detecting/monitoring (optional)
20) More Alarm functions:
    * Over speed alert
    * Geo-fence alert
    * Power failure/low power alert
    * SOS alert

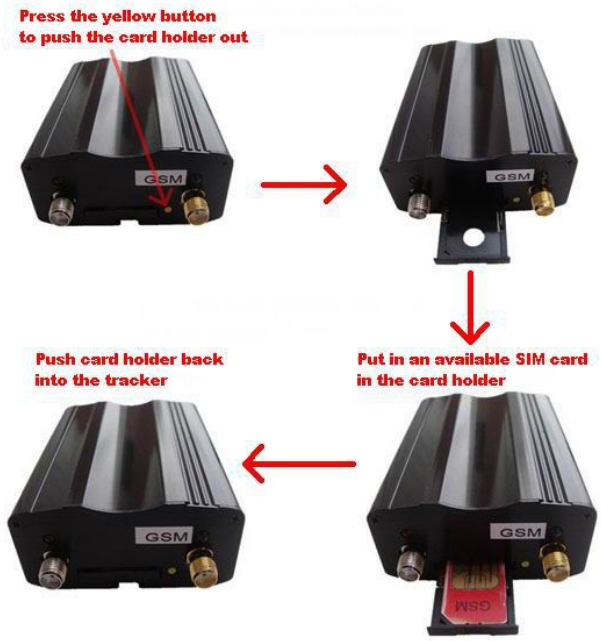
4. Specification

Items	Specifications
Dimension	75*54*25mm
Weight	123g
Input voltage	DC 9V~36V/1.5A
Back-up Battery	650mAh/3.7V
Power Consumption	65mA standby current
Operating Temperature	-40°C~75°C
Humidity	5%~95%
Battery Work Time	33 hours in power-saving mode and 8 hours in normal mode
LED	2 LED lights to show GPS, GSM status
Button	1 SOS and 1 power on/off
Microphone	Default
Memory	2M Byte
Sensor	Motion sensor
GSM Frequency	GSM 850/900/1800/1900MHz
GPS Chip	Ublox7/Skr
GPS Sensitivity	-160dBm
Positioning Accuracy	5meters, CEP

5. First Use

5.1 Install SIM Card

Check that the SIM has not run out of credit (test the SIM in a phone to make sure it can send and receive SMS);
Before installing the SIM card, turn off the power for VT200W,
then install the SIM card as following:

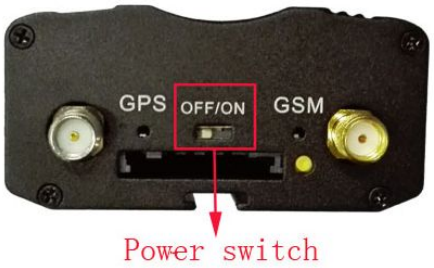

Press the yellow button to push the card holder out
Put in an available SIM card in the card holder
Push card holder back into the tracker
GSM

5.2 Charging

Connect the device with external power like car battery, and turn on its power switch and it will do charging automatically.

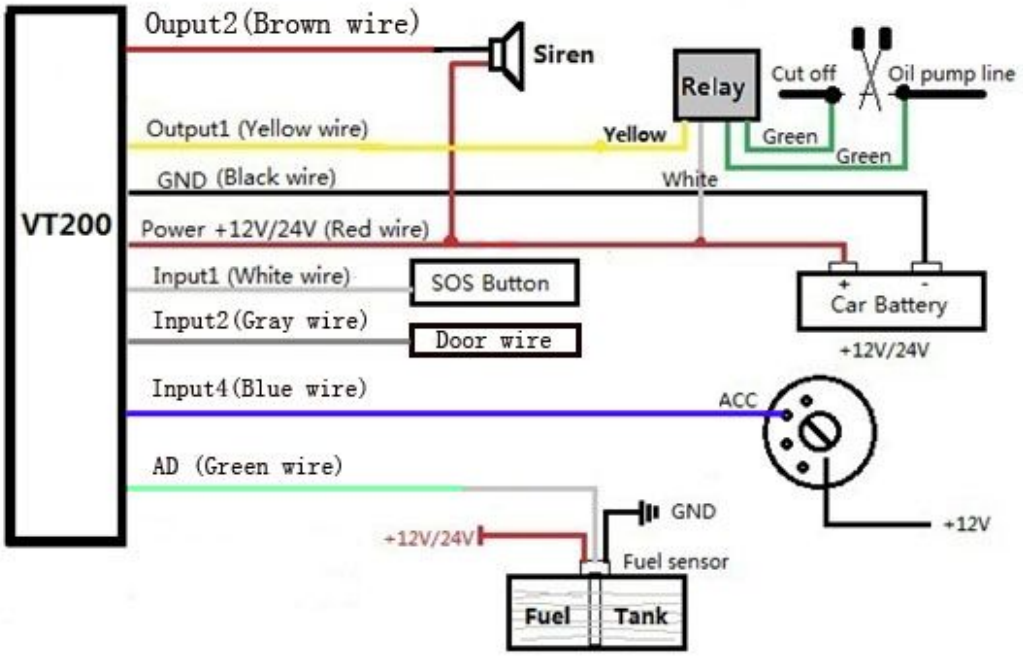
5.3 LED indications

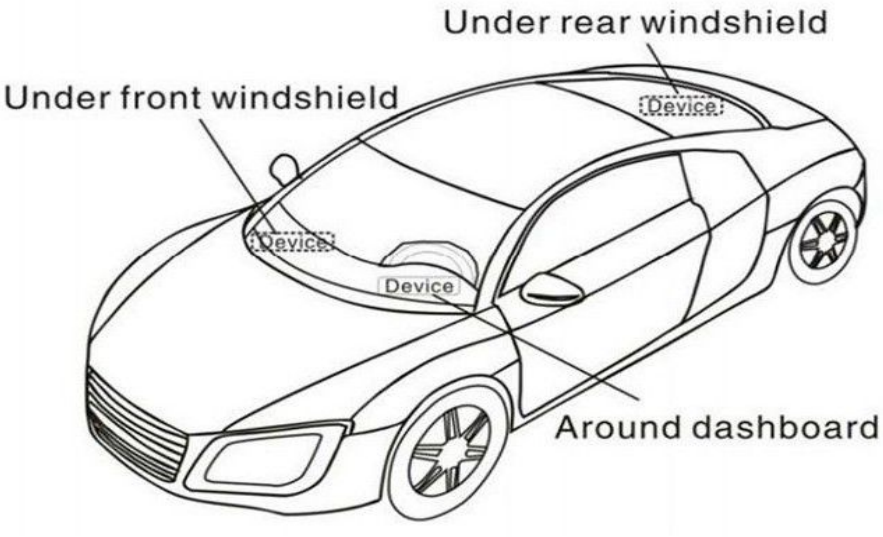
Push the power switch to turn on/off VT200



GPS LED (Red)	
Flashing (every 0.1 second)	Initializing or back-up battery power is low
Flashing (0.1 second on and 2.9 seconds off)	Device has A GPS fix
Flashing (1 second on and 2 seconds off)	Device has no GPS fix
GSM LED (Green)	
Flashing (every 0.1 second)	Initializing
Flashing (0.1 second on and 2.9 seconds off)	Device is connected to the GSM network
Flashing (1 second on and 2 seconds off)	Device is not connected to the GSM network

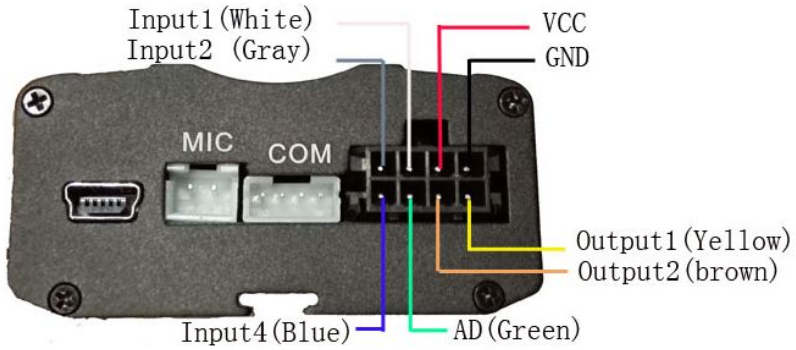
6. Installation





7.1 Install I/O Cable

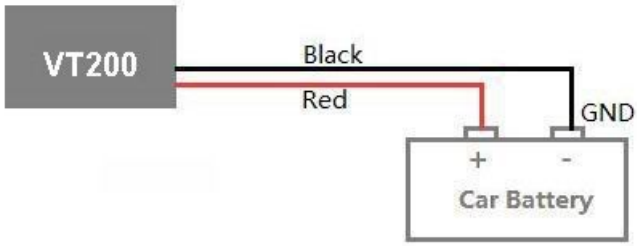
The I/O cable including power, Negative/Positive Input and Output, Analog Input.



PIN Number	Color	Description
Input 1/SOS	White wire	Digital Input 1 (negative triggering), E.g. connect SOS panic button
Input 2	Gray wire	Digital Input 2 (negative triggering), E.g. detecting status of Door open/close
Input4	Blue wire	Digital Input 4 (positive triggering), E.g. detecting status of ACC on/off
Output 1	Yellow wire	E.g. Connect relay to cut off engine or fuel
Output 2	Brown wire	E.g. Connect siren
VCC	Red wire	Positive, DC In (power source). Input voltage: 9V~36V. 12V suggested.
GND	Black wire	Negative
AD	Green wire	It can be used to connect with fuel/temperature sensor etc.
MIC		It is used for connecting for microphone
COM		It is used for connecting for smart phone reader

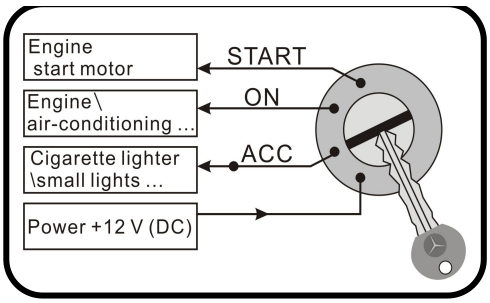
7.2 Power/GND

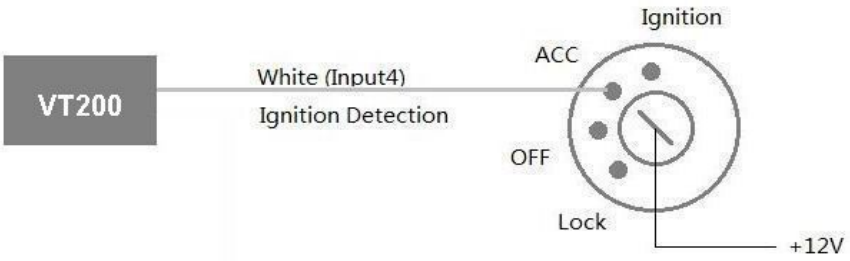
Connect GND (Black) and power (Red) wires to the battery of vehicle.



7.3 Digital Input

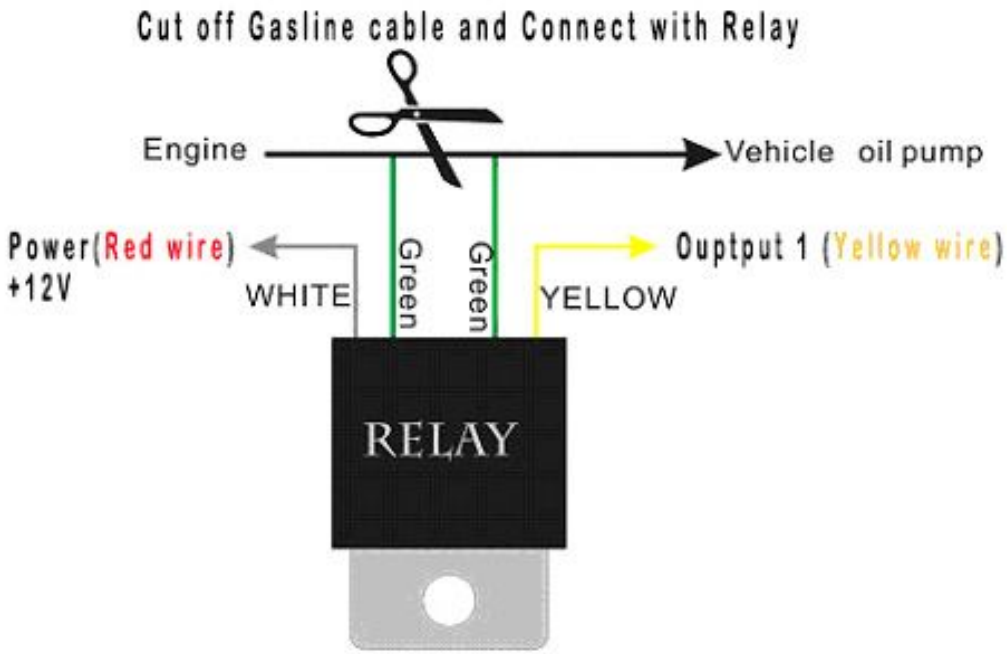
Example: Detecting vehicle engine on/off status





7.4 Output

Example: Control fuel-cut



7.5 Install GPS/GSM Antenna

Note: Do not shield or cover the GPS Antenna with any objects containing metal.

7.6 Install microphone

7. Basic SMS Commands:

Note:
①The default password is 000000, you should change the password when use the device.
Change user's password: W000000,001,******
(000000 is old password; ******is new password)
② Command Letter must be capitalized.

8.1 Position Report

Description: To know the position of your car, send an SMS or make a telephone call directly to the device and you will receive an SMS with its location and other information.

Command: 000000CHK
For example:
Send SMS: 000000CHK
Received SMS as below picture:

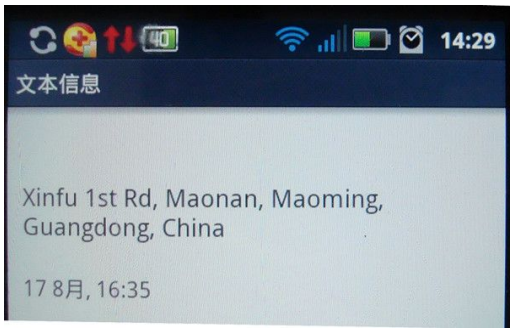
Another easier way is call the device's phone,
After ring for a while hang up the phone, then
You will receive a position SMS by the device.

Item	Description
ID: 1234567890	The tracker's ID number
	The engine is turned off
Latitude=23 08 57.58N, Longitude=113 18 59.31E	Latitude and longitude information, "N" in latitude means North; "E" in longitude means East.
Speed=0.00Km/h	Speed information
Odometer=0.013km/h	Odometer information
2012-09-23,11:22	Date and time

You can copy this coordinate get from the SMS into *http//:maps.google.com* and see its location as picture:

8.2 Set receiving physical address name via SMS

Description: To know specific address of device, send an SMS and you receive an SMS with its location physical address name.



Simplified SMS command:

000000ADD

For example: send SMS:000000ADD

Then you will receive a SMS as below

You can send this command to get physical Address name.

(Note: This function need support of the GPRS01 or SMS01 tracking platform, address SMS will be received in text format.)

8.3 Get Google Map's Link via SMS

Description: You will get a Google map URL after sent the command, click the URL, then the location can be shown directly on Google maps on your mobile phone.

Simplified SMS Command:

000000MAP

For example: Send SMS: 000000MAP

Then you will get the SMS as below picture:

Note: By click the link, you can get the location in Google map from your mobile phone.

8.4 To cut off Engine, immobilize the vehicle

Simplified SMS Command：000000STP

SMS send: 000000STP

Engine stop/vehicle immobilize

Simplified SMS Command: 000000RES

SMS send: 000000RES

Engine Restore

8.5 Set over speed alarm

Command: W000000,005,XX

Description: XX(the speed preset value)　XX=00, disable　XX=[01<XX<20](unit:10Km)

Example:
SMS send: W000000,005,10
SMS receive: SET OK! SPEED LIMIT:100Km/h
Meaning: If your speed is over 100Km/h, an alarm SMS will send to your phone to warn you.

8. Simplified SMS Commands：

a) Engine Stop/Vehicle Immobilize: 000000STP
b) Engine Restore: 000000RES
c) Check Location Address Name: 000000ADD
d) Location Coordinate Check: 000000CHK
e) Get Location Google Map's URL with Mobile phone: 000000MAP
f) Voice Monitoring: 000000MON<telephone number>
For example: Send SMS Command: 000000MON13800138000;

Note: More SMS Commands, please check Appendix 2: Command List

9. Smart phone reader

9.1 How to connect the smart phone to the phone reader by wifi

let the GPS Tracker work normally

then use your smart phone to connect the wifi ID from Phone reader

The default wifi ID: smart.car.alarm , default wifi password: 88888888

9.2 How to change the Wifi ID and Password

You can change the wifi ID and password by yourself

Note: How to change the wifi ID and Password , please see the below command

W000000,052,wifi ID,PWD

Wifi ID: Max 15 characters

PWD（password）: At least 8 characters， Max 15 characters

For example： the new wifi ID is Happyeveryday , Password is 12345678adb

You can send W000000,052,Happyeveryday,12345678adb

9.3 How to arm /disarm the car by phone reader

(1)Enable the Phone reader Funtion First

Enable the Phone reader Funtion: **W000000,062,1**
Disable the Phone reader Function: **W000000,062,0**

(2) when your mobile phone is connecting with the phone reader by **correct wifi password** , the car is disarmed.

If your mobile phone does NOT connect to the phone reader , the car is armed

(3)SMS Command to arm/disarm
000000ARM
000000DSM

If send **000000DSM** to disarm ,the GPS Tracker will disable the Phone reader function , if you want to enable the Phone reader Funtion again, you should send W000000,062,1 again

(4)

If in armed status, the Input2 is trigered (door is open), the GPS Tracker will send SMS alarm notification to the **A Phone number** and call **A Phone number** ,then triger the output2 to let the siren ring for 10 seconds

If in armed status,the Input4 is trigered (engine is on), the GPS Tracker will send SMS alarm notification to the **A Phone number** and call **A Phone number** ,then triger the output2 to let the siren ring for 10 seconds

(5)

Enable cut off oil function/fuel function: **W000000,061,1**

Disable cut off oil function/fuel function:**W000000,061.0**

If enable cut off oil function, in armed status,if the input2 or input4 is trigered (door is opened or engine is on) , the GPS Tracker also will cut off the oil pump wire

10. VT200W Packing and Accessories

Accessories	QTY	IMAGE	FUNCTION
Main unit	1 piece		VT200W's function
GSM Antenna	1 piece		Receiving GSM network signal
GPS Antenna	1 piece		Receiving satellite locating signal data
Relay	1 piece		To cut-off/restore the power/fuel supply
8 PIN wire	1 piece		Mainly used to connect to the vehicle
Microphone	1 piece		Voice monitoring

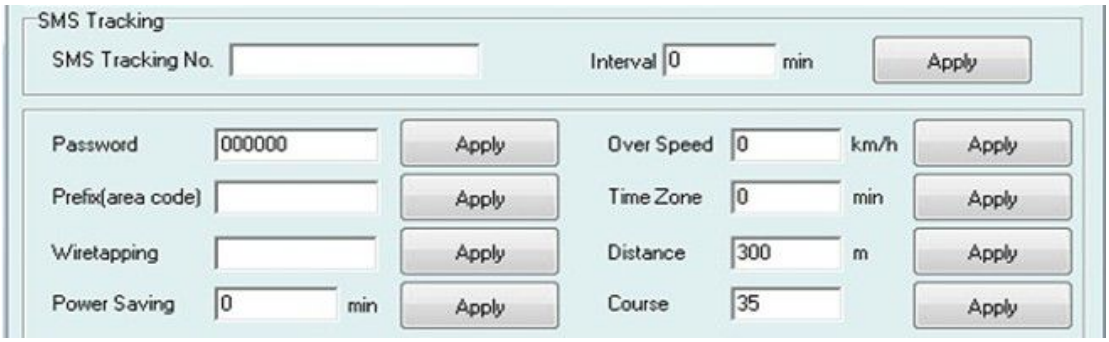
11. Optional Accessories

Optional Accessories	Image	Function
Temperature Sensor		Temperature monitoring
Fuel Sensor		Fuel Monitoring
Siren		
Configure USB cable		Configure tracker's parameter Upgrading the tracker's firmware
Smart Phone Reader		Arm/disarm by mobile phone

12. Troubleshooting

Problem: Unit will not turn on	
Possible Cause:	Resolution:
Wiring was not connected properly	Check and make sure wiring connection is in order.
Battery needs charging	Recharge battery
Problem: Unit will not respond to SMS	
Possible Cause:	Resolution:
GSM antenna was not installed properly	Make VT200 connected to GSM network.
GSM Network is slow	Wait for SMS. Some GSM networks slow down during peak times or when they have equipment problems.
Unit is sleeping	Cancel sleeping mode
Wrong password in your SMS	Insert the correct password
The SIM in VT200 has run out of credit	Replace or top up the SIM card
No SIM card	Insert working SIM card. Check in phone that the SIM can send SMS messages.
SIM card has expired	Check in phone that the SIM can send SMS messages. Replace SIM card if needed.
SIM has PIN code set	Remove PIN code by inserting SIM in you phone and deleting the code
SIM is warped or damaged	Inspect SIM, clean the contacts. If re-inserting does not help try another to see if it will work.
Roaming not enabled	If you are in a different country your SIM account must have roaming enabled
Battery is low	Recharge the unit and the GSM will start working.
Problem: SMS from VT200 states 'Last……'	
Possible Cause:	Resolution:
Unit does not have clear view of the sky	Move the antenna of the unit to a location where the sky is visible.
VT200 is in an inner place	Wait for the target to come out

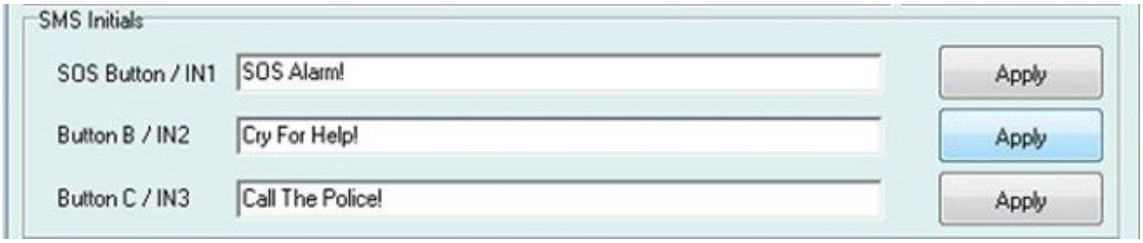
Appendix 1 Configure by computer



Item	Description
SMS tracking No. Interval	To put a mobile phone number for automatic tracking by SMS at certain time interval in minutes
Password	To set SMS command password, the default is 000000,
Over Speed	To set speed limit for over speed alarm
Prefix(area code)	To set country code
Time Zone	To set time zone, GMT*60 (minutes), if in west half western hemisphere, "-" is necessary to put ahead
Wiretapping	To set wiretapping mobile phone number
Distance	To set track and upload data by certain distance in meters
Power Saving	To set time enter into standby mode when shaking not detected to save power and GPRS data traffic
Course	To set upload data via angle shifting by certain angles

A Phone number	In armed status, if the IN2 is trigered (door is opened), the tracker will send SMS alarm to the **A Phone number,and call A Phone number** In armed status, if the IN4 is trigered (engine is on),the tracker will send SMS alarm to the **A Phone number and call A Phone**

	number
B Phone number	When the SOS button is pressed ,the tracker will send SMS alarm to the **B Phone number** and call the **B Phone number**



SOS Button/IN1	To customize the reply SMS text when SOS Button/Input1 triggered
Button B/IN2	To customize the reply SMS text when Button B/Input 2 triggered
Button C/IN3	To customize the reply SMS text when Button C/Input 3 triggered

Call for SMS	Tick it to reply SMS when calling in
Cut off Power	Tick it to send alert when the external power be cut off

Appendix 2: Command List

Description	Command	Remarks
Get current location	000000CHK	Get current location of VT200
Get location in Google map URL format via SMS	000000MAP	http://maps.google.com/maps?f=q&hl=en&q=22.542563,114.077971&ie=UTF8&z=16&iwloc=addr&om=1
Set function of receiving location physical address name via SMS	000000ADD	This function need support of the GPRS01 or SMS01 tracking platform, address SMS will be received in text format.
Set phone number for wiretapping	000000MON<telephone number>	telephone number for wiretapping and max. 16 digits
To cut off the engine	000000STP	

To restore the engine	000000RES	
Password Initialization	W888888,999,666	This command will reset the current password to factory default password 000000
Set tracking by distance function	W******,045,X	Measured by Meter(s), X=0, disable this functio； X=1—65535，means the distance interval in this function.
Set tracking by driving angle change function	W******,036,Degree	Measured by Degree(s), Degree=0,disable this function； X=1-359，means set angle degree interval in this function.
Extend Settings	W******,008,ABCDEFGHIJ###	A=0, disable position report function when a call is made to VT200 A=1, enable position report function to get position SMS by Calling VT200 I=0, disable power failure alert I=1, enable power failure alert The functions of BCDEFGHJ are remained for furthur use. ### is the ending character.
Set over speed alarm When VT200 speeds higher than the preset value, it will send one over speed alarm SMS to the SOS preset number.	W******,005,XX	XX (the speed preset value) =00 , disable =[01<XX<20] (unit: 10Km)
Set Movement alarm. Movement alarm needs to be trigered in **Armed status**, and it use the longitude and latitude of entering the armed status as the starting point of Movement	W******,006,XX	XX (set distance from current central point place) =00, disable =01, 30m =02, 50m =03, 100m =04, 200m =05, 300m =06, 500m =07, 1000m =08, 2000m
Clear the history log in the memory	W000000,333	
Initialization	W******,990,099###	### is the ending character.

To turn all the parameters / settings (except for the password) to factory default.		
Reboot GPS and GSM Module	W******,900###	### is the ending character.
Set power saving mode when VT200 is still (In power saving mode, GPS stops working. GSM enters standby mode and stop sending out message until it is activated by an SMS or an incoming call)	W******,026,XX	XX=00, to disable this function XX=01~99, to set this function. It is in unit of minute. Example: If XX=10, VT200 will enter power saving mode in 10 minutes after it is immobile.
Get version and serial number	W******,600	To get version and serial number of current firmware
Get IMEI No.	W******,601	To get device IMEI No.
Set preset phone number for SOS button	W******,003,F,P,T1,T2	F=0, to disable this function; F=1, only sending SMS; F=2, only calling preset phone number; F=3, both SMS and calling (default) P is the button number and should be 1,or 2, or 3. If SOS button is linked to IN1, then P=1. T: Preset phone number (T must be less than 16 digits) T1: When no T2, T1 for short message number or dial the number; when have T2, T1 for message number. T2: for dial the number.
Set clear/reset odometer function	W******,046	To clear and reset odometer information to zero.
Change user's password	W******,001,######	****** is old password ###### is new password
Output Control (Safe mode) This function is achievable when the speed is	W******,120,ABCDE	ABCDE represents Out1, Out2, Out3, Out4, Out5 respectively. If A or B or C or D or E, =0, to disable the output =1, to enable the output

below 10km/h and GPS is available.		=2, to remain previous status

Presetting by SMS for GPRS tracking		
Set ID for VT200 by SMS	W******,010,ID	Tracker ID must be less than 14 digits
Set APN by SMS	W******,011,APN,APN Name, APN Password	APN Name, APN Password If no password required, just insert APN name only; APN defaulted as 'CMNET'; APN name + password not over 39 characters.
Set IP Address and Port by SMS	W******,012,IP, Port	IP: xxx.xxx.xxx.xxx Port: [1,65536]
Enable GPRS Function	W******,013,X	X=0, close GPRS (default); X=1, enable TCP X=2, enable UDP
Set Time Interval for Sending GPRS Packet	W******,014,XXXXX	XXXXX should be in five digitals and in unit of 10 seconds. XXXXX=00000,to disable this function; XXXXX=00001~65535, time interval for sending GPRS packet and in unit of 10 seconds.

Appendix 3: GPRS Command From platform to GPS Tracker

1、4101 Track on demand
2、4102 Set GPRS Interval
3、4136 Set Veer Report
4、4145 Set Distance Interval
5、4105 Set Over Speed
6、4106 Set Movement alarm
7、4107/4127 Set Outfence /Infence

8、4103 Set Authorization
9、4126 Set Power Saving time
10、4130 Set Listern number /wiretapping
11、4132 Set Time Zone
12、9001 Read Version
13、9002 Read GPRS Interval
14、9003 Read Authorization